

Please amend the above-identified patent application, without prejudice, as follows:

IN THE CLAIMS:

Amend claims 1-3, 7, 12 and 13 by replacement as follows:

1. (twice amended) Electroluminescent device comprising in this order

(a) an anode

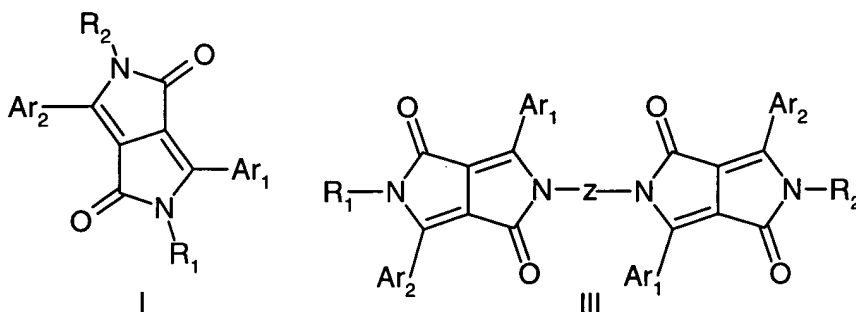
(b) a hole transporting layer

(c) a light-emitting layer

(d) optionally an electron transporting layer and

(e) a cathode

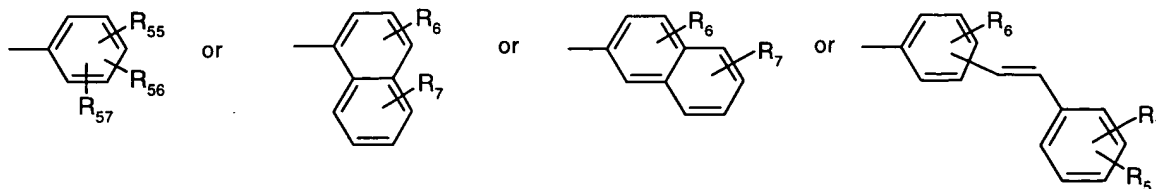
and a light-emitting substance, wherein the light-emitting substance is a diketopyrrolopyrrole ("DPP") represented by formula I or formula III

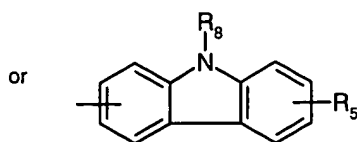


wherein  $R_1$  and  $R_2$ , independently from each other, stand for  $C_1$ - $C_{25}$ -alkyl, allyl which can be substituted one to three times with  $C_1$ - $C_3$ alkyl or  $Ar_3$ , or  $-CR_3R_4-(CH_2)_m-Ar_3$ , wherein  $R_3$  and  $R_4$  independently from each other stand for hydrogen,  $C_1$ - $C_4$ alkyl, or phenyl which can be substituted one to three times with  $C_1$ - $C_3$  alkyl,

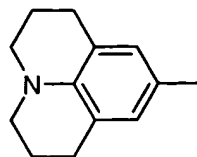
$Ar_3$  stands for phenyl or 1- or 2-naphthyl which can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, halogen or phenyl, which can be substituted with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy one to three times, and  $m$  stands for 0, 1, 2, 3 or 4,

$Ar_1$  and  $Ar_2$ , independently from each other, stand for

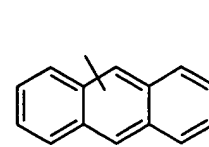
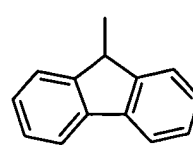
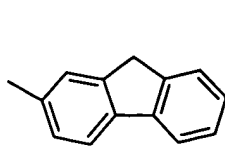
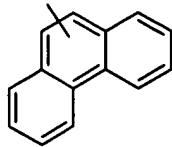
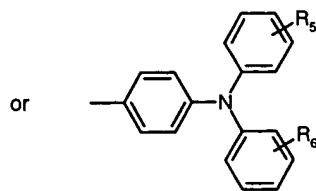




or julolidyl,



, which can be substituted one to four times with C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy, or phenyl



, or

wherein

R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub>, independently from each other, stand for hydrogen, cyano, halogen, C<sub>1</sub>-C<sub>6</sub>alkyl, -NR<sub>8</sub>R<sub>9</sub>, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -Se(O)<sub>n</sub>R<sub>8</sub>, or phenyl, which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy,

R<sub>55</sub>, R<sub>56</sub> and R<sub>57</sub>, independently from each other, stand for hydrogen, cyano, halogen, -NR<sub>8</sub>R<sub>9</sub>, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -Se(O)<sub>n</sub>R<sub>8</sub>, or phenyl, which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy,

with the proviso that R<sub>56</sub> and R<sub>57</sub> do not simultaneously stand for hydrogen,

wherein R<sub>8</sub> and R<sub>9</sub>, independently from each other, stand for hydrogen, phenyl, C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, -CR<sub>3</sub>R<sub>4</sub>-(CH<sub>2</sub>)<sub>m</sub>-Ph, R<sub>10</sub>, wherein R<sub>10</sub> stands for C<sub>6</sub>-C<sub>24</sub>-aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>1</sub>-C<sub>8</sub>alkoxy, or halogen, or

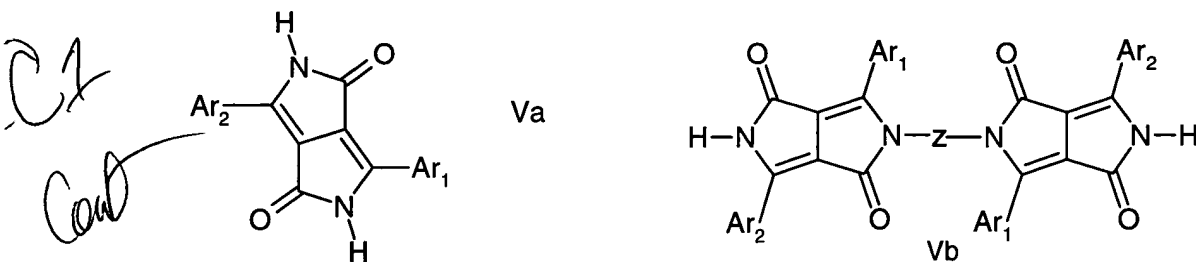
R<sub>8</sub> and R<sub>9</sub> stand for -C(O)R<sub>11</sub>, wherein R<sub>11</sub> can be C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, R<sub>10</sub>, -OR<sub>12</sub> or -NR<sub>13</sub>R<sub>14</sub>, wherein R<sub>12</sub>, R<sub>13</sub>, and R<sub>14</sub> stand for C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, C<sub>6</sub>-C<sub>24</sub>-aryl,

or

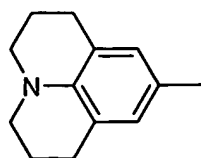
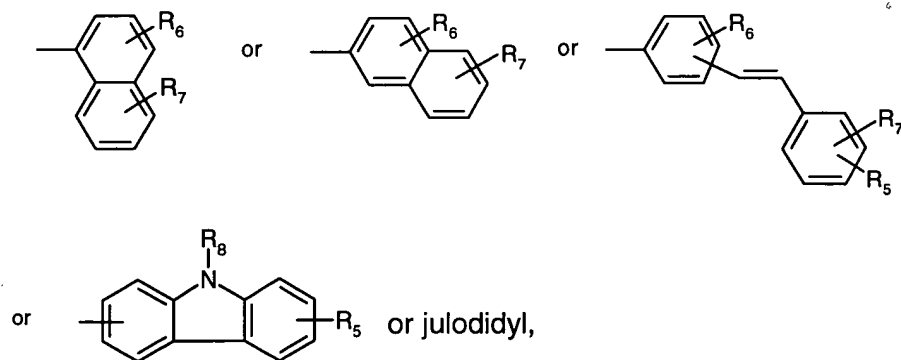
R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub>, independently of one another, stand for a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein the aryl and heterocyclic radical can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy, or -NR<sub>8</sub>R<sub>9</sub>,

stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-$ , or  $-\text{CH}_2-\text{CH}_2-\text{NR}'_5-\text{CH}_2-\text{CH}_2-$ , wherein  $R'_5$  independently from each other, stand for hydrogen, cyano, halogen,  $\text{C}_1-\text{C}_6$ alkyl,  $-\text{NR}_8\text{R}_9$ ,  $-\text{OR}_{10}$ ,  $-\text{S}(\text{O})_n\text{R}_8$ ,  $-\text{Se}(\text{O})_n\text{R}_8$ , or phenyl, which can be substituted one to three times with  $\text{C}_1-\text{C}_6$ alkyl or  $\text{C}_1-\text{C}_6$ alkoxy, and  $n$  stands for 0, 1, 2 or 3, and wherein  $Z$  stands for a diradical selected from the group consisting of a single bond,  $\text{C}_2-\text{C}_6$ alkylene, which can be substituted one to three times with  $\text{C}_1-\text{C}_4$ alkyl,  $\text{C}_1-\text{C}_4$ alkoxy, or phenyl, phenylene or naphthylene, wherein in case of the DPP of formula III  $R_{55}$ ,  $R_{56}$  and  $R_{57}$ , independently from each other, can also stand for  $\text{C}_1-\text{C}_6$ alkyl and  $R_{56}$  and  $R_{57}$  can also stand simultaneously for hydrogen.

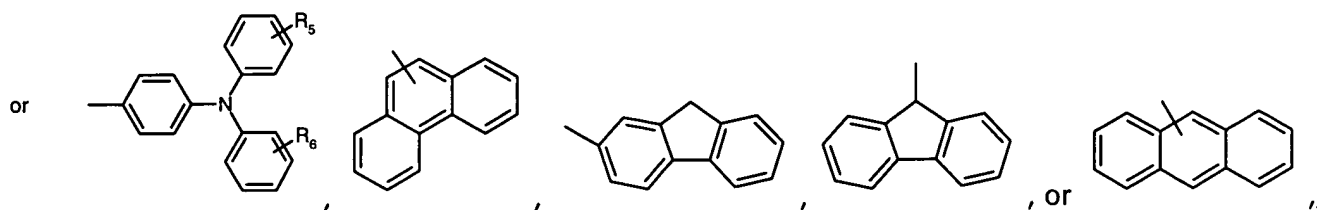
2. (twice amended) Process for the preparation of a compound represented by formula I or III according to claim 7 comprising in a first step the DPP derivative of formula Va or formula Vb



wherein  $\text{Ar}_1$  and  $\text{Ar}_2$  are independently from each other,



, which can be substituted one to four times with  $\text{C}_1-\text{C}_4$ alkyl,  $\text{C}_1-\text{C}_4$ alkoxy, or phenyl



wherein

$R_5$ ,  $R_6$  and  $R_7$ , independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-NR_8R_9$ ,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy,

wherein  $R_8$  and  $R_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ alkyl,  $C_5$ - $C_{12}$ cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen, or

$R_8$  and  $R_9$  stand for  $-C(O)R_{11}$ , wherein  $R_{11}$  can be  $C_1$ - $C_{25}$ alkyl,  $C_5$ - $C_{12}$ cycloalkyl,  $R_{10}$ ,  $-OR_{12}$  or  $-NR_{13}R_{14}$ ,  
 C1  
 Cont  
 wherein

$R_{12}$ ,  $R_{13}$ , and  $R_{14}$  stand for  $C_1$ - $C_{25}$ alkyl,  $C_5$ - $C_{12}$ cycloalkyl,  $C_6$ - $C_{24}$ -aryl,

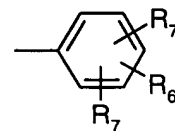
or

$R_5$ ,  $R_6$  and  $R_7$ , independently of one another, stand for a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy,

or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or

$-CH_2-CH_2-NR'_5-CH_2-CH_2-$ , and  $n$  stands for 0, 1, 2 or 3, wherein  $R'_5$  independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy,

and wherein  $Z$  stands for a diradical selected from the group consisting of a single bond,  $C_2$ - $C_6$ alkylene, which can be substituted one to three times with  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ alkoxy, or phenyl, phenylene or naphthylene, with the proviso that  $R_6$  and  $R_7$  do not stand simultaneously for hydrogen

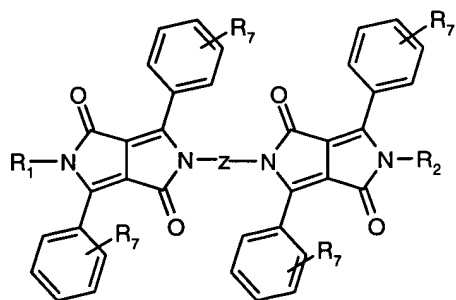


wherein in case of the DPP represented by formula III Ar<sub>1</sub> and Ar<sub>2</sub> can also stand for wherein R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub>, independently from each other, stand for hydrogen, cyano, halogen, C<sub>1</sub>-C<sub>6</sub>alkyl, -NR<sub>8</sub>R<sub>9</sub>, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -Se(O)<sub>n</sub>R<sub>8</sub>, or phenyl, which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy,

with a base, then, in a second step, treating the reaction mixture obtained in the first step with an alkylating agent, wherein in the first step the base is a hydride, an alkali metal alkoxide or a carbonate, and the alkylating agent is a compound of the formula (R<sub>1</sub>)<sub>1 or 2</sub>X, wherein X stands for SO<sub>3</sub><sup>-</sup>, (p-Me-phenyl)SO<sub>3</sub><sup>-</sup>, (2,4,6-trimethyl-phenyl)-, SO<sub>3</sub><sup>-</sup>, -CO<sub>3</sub><sup>-</sup>, -SO<sub>4</sub><sup>-</sup>, or halogen, or a mixture of (R<sub>1</sub>)<sub>1 or 2</sub>X and (R<sub>2</sub>)<sub>1 or 2</sub>X, wherein R<sub>1</sub> and R<sub>2</sub> are independently from each other, C<sub>1</sub>-C<sub>25</sub>-alkyl, allyl which can be substituted one to three times with C<sub>1</sub>-C<sub>3</sub>alkyl or Ar<sub>3</sub>, or -CR<sub>3</sub>R<sub>4</sub>-(CH<sub>2</sub>)<sub>m</sub>-Ar<sub>3</sub>, wherein R<sub>3</sub> and R<sub>4</sub> independently from each other stand for hydrogen or C<sub>1</sub>-C<sub>4</sub>alkyl, or phenyl which can be substituted one to three times with C<sub>1</sub>-C<sub>3</sub> alkyl,

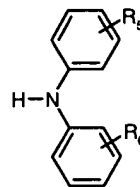
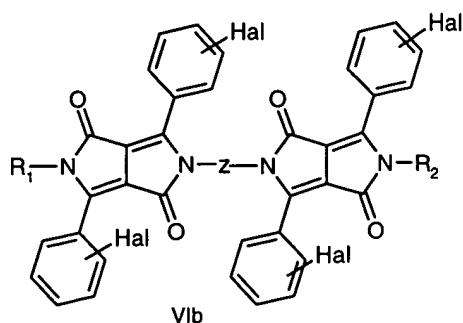
Ar<sub>3</sub> stands for phenyl or 1- or 2-naphthyl which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>1</sub>-C<sub>8</sub>alkoxy, halogen or phenyl, which can be substituted with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy one to three times, and m stands for 0, 1, 2, 3 or 4.

3. (twice amended) Process for the preparation of compounds represented by formula IIIa



IIIa

comprising (a) treating in a first step the DPP derivative of formula VIa or formula VIb



wherein  $R_7$  stand for  $-NR_8R_9$ ,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or

independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-NR'_8R'_9$ ,  $-OR_{10}$ ,  $-S(O)_nR'_8$ ,  $-Se(O)_nR'_8$ , wherein

$R_8$  and  $R_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen, or

$R_8$  and  $R_9$  stand for  $-C(O)R_{11}$ , wherein  $R_{11}$  can be  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $R_{10}$ ,  $-OR_{12}$  or  $-NR_{13}R_{14}$ , wherein  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  stand for  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $C_6$ - $C_{24}$ -aryl,

$R'_8$  and  $R'_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen, or

or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or

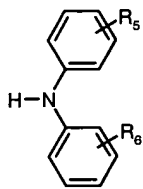
-CH<sub>2</sub>-CH<sub>2</sub>-NR'<sub>5</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, wherein R'<sub>5</sub> independently from each other, stand for hydrogen, cyano, halogen, C<sub>1</sub>-C<sub>6</sub>alkyl, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -Se(O)<sub>n</sub>R<sub>8</sub>, or phenyl, which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy, and n stands for 0, 1, 2 or 3,

R'<sub>8</sub> and R'<sub>9</sub>, independently from each other, stand for hydrogen, phenyl, C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, -CR<sub>3</sub>R<sub>4</sub>-(CH<sub>2</sub>)<sub>m</sub>-Ph, R<sub>10</sub>, wherein R<sub>10</sub> is as defined above, or

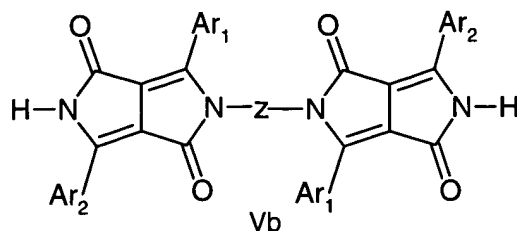
R'<sub>8</sub> and R'<sub>9</sub> stand for -C(O)R<sub>11</sub>, wherein R<sub>11</sub> is as defined above,

or -NR'<sub>8</sub>R'<sub>9</sub> stands for a five- or six-membered heterocyclic radical in which R'<sub>8</sub> and R'<sub>9</sub> together stand for tetramethylene, pentamethylene, -CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-, or -CH<sub>2</sub>-CH<sub>2</sub>-NR'<sub>5</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, wherein R'<sub>5</sub> stand for hydrogen, cyano, halogen, C<sub>1</sub>-C<sub>6</sub>alkyl, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -Se(O)<sub>n</sub>R<sub>8</sub>, or phenyl, which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy, and n is as defined above,

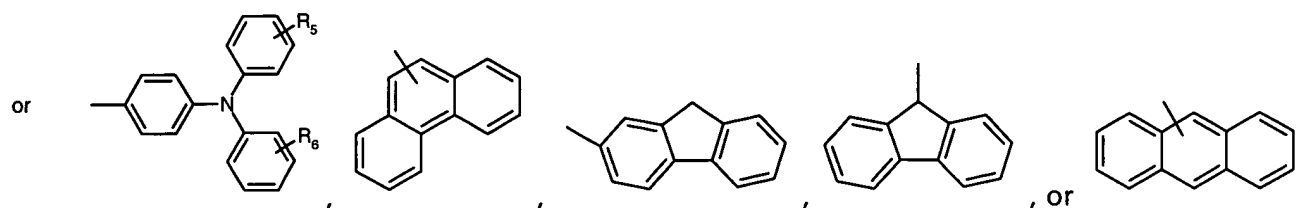
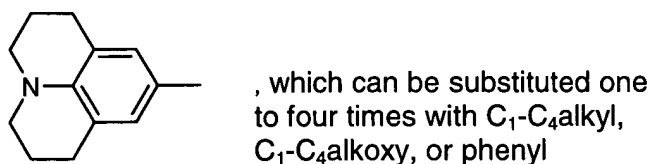
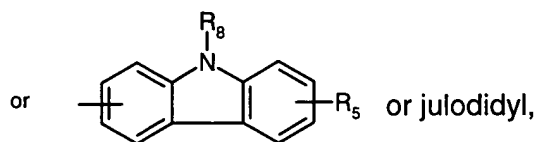
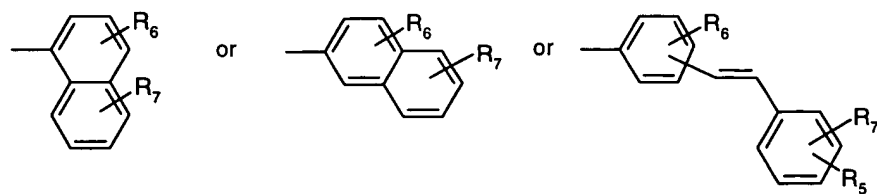
R<sub>1</sub> and R<sub>2</sub> are independently from each other, hydrogen, C<sub>1</sub>-C<sub>25</sub>-alkyl, allyl which can be substituted one to three times with C<sub>1</sub>-C<sub>3</sub>alkyl or Ar<sub>3</sub>, or -CR<sub>3</sub>R<sub>4</sub>-(CH<sub>2</sub>)<sub>m</sub>-Ar<sub>3</sub>, wherein R<sub>3</sub> and R<sub>4</sub> independently from each other stand for hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl, or phenyl which can be substituted one to three times with C<sub>1</sub>-C<sub>3</sub>, Hal stands for halogen, with a nucleophilic agent selected from -NR<sub>8</sub>R<sub>9</sub>, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -



Se(O)<sub>n</sub>R<sub>8</sub>, or , in a molar ratio of DPP VIa or VIb:nucleophilic agent in the range of 1.2:1 to 0.8:1, or, if R<sub>2</sub> has the same meaning as R<sub>1</sub> in the range of from 1:2.5 to 1:1, in the presence of an anhydrous dipolar aprotic solvent, and of an anhydrous base in an amount in the range of from 0.1 to 15 moles per mole of the nucleophilic agent, at a temperature in the range of from 100 to 220°C and under a pressure in the range of from 100 to 300 kPa, and optionally isolating the obtained compound



(b) then treating the obtained compound Va or Vb, wherein Ar<sub>1</sub> and Ar<sub>2</sub> are as defined in claim 7 independently from each other,



wherein

R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub>, independently from each other, stand for hydrogen, cyano, halogen, C<sub>1</sub>-C<sub>6</sub>alkyl, -NR<sub>8</sub>R<sub>9</sub>, -OR<sub>10</sub>, -S(O)<sub>n</sub>R<sub>8</sub>, -Se(O)<sub>n</sub>R<sub>8</sub>, or phenyl, which can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl or C<sub>1</sub>-C<sub>8</sub>alkoxy,

wherein R<sub>8</sub> and R<sub>9</sub>, independently from each other, stand for hydrogen, phenyl, C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, -CR<sub>3</sub>R<sub>4</sub>-(CH<sub>2</sub>)<sub>m</sub>-Ph, R<sub>10</sub>, wherein R<sub>10</sub> stands for C<sub>6</sub>-C<sub>24</sub>-aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>1</sub>-C<sub>8</sub>alkoxy, or halogen, or

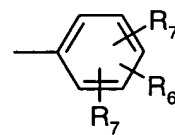
R<sub>8</sub> and R<sub>9</sub> stand for -C(O)R<sub>11</sub>, wherein R<sub>11</sub> can be C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, R<sub>10</sub>, -OR<sub>12</sub> or -NR<sub>13</sub>R<sub>14</sub>, wherein

R<sub>12</sub>, R<sub>13</sub>, and R<sub>14</sub> stand for C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>5</sub>-C<sub>12</sub>-cycloalkyl, C<sub>6</sub>-C<sub>24</sub>-aryl,

or

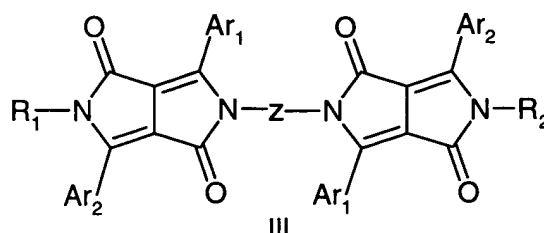
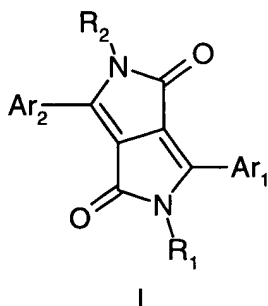


$R_5$ ,  $R_6$  and  $R_7$ , independently of one another, stand for a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy, or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-\text{CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2-$ , or  $-\text{CH}_2\text{-CH}_2\text{-NR}'_5\text{-CH}_2\text{-CH}_2-$ , and  $n$  stands for 0, 1, 2 or 3, wherein  $R'_5$  independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-\text{OR}_{10}$ ,  $-\text{S(O)}_nR_8$ ,  $-\text{Se(O)}_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy, and wherein  $Z$  stands for a diradical selected from the group consisting of a single bond,  $C_2$ - $C_6$ alkylene, which can be substituted one to three times with  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ alkoxy, or phenyl, phenylene or naphthylene, with the proviso that  $R_6$  and  $R_7$  do not stand simultaneously for hydrogen



wherein in case of the DPP represented by formula III  $\text{Ar}_1$  and  $\text{Ar}_2$  can also stand for wherein  $R_5$ ,  $R_6$  and  $R_7$ , independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-\text{NR}_8R_9$ ,  $-\text{OR}_{10}$ ,  $-\text{S(O)}_nR_8$ ,  $-\text{Se(O)}_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy, with a base, thereafter in a second step, treating the reaction mixture obtained in the first step of (b) with an alkylating agent, wherein in the first step of (b) the base is a hydride, an alkali metal alkoxide or a carbonate, and the alkylating agent is a compound of the formula  $(R_1)_{1 \text{ or } 2}X$ , wherein  $X$  stands for  $\text{SO}_3^-$ ,  $(p\text{-Me-phenyl})\text{-SO}_3^-$ ,  $(2,4,6\text{-trimethyl-phenyl})\text{-SO}_3^-$ ,  $-\text{CO}_3^-$ ,  $-\text{SO}_4^-$ , or halogen, or a mixture of  $(R_1)_{1 \text{ or } 2}X$  and  $(R_2)_{1 \text{ or } 2}X$ .

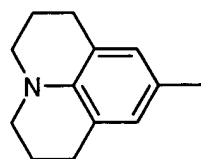
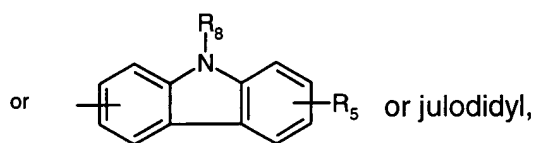
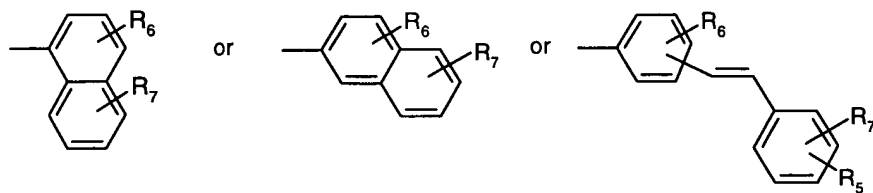
7. (twice amended) Fluorescent diketopyrrolopyrrole represented by formula I or formula III



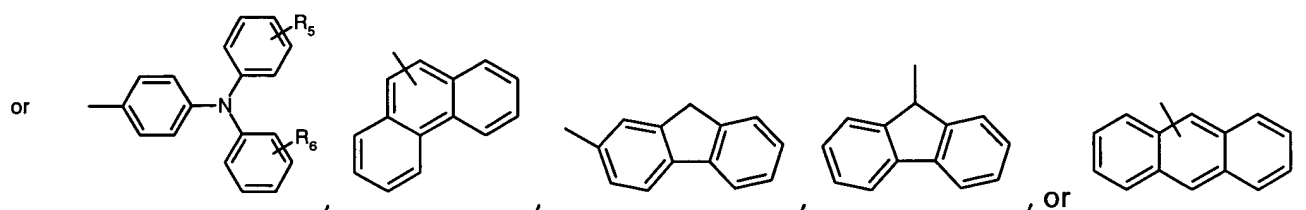
wherein  $R_1$  and  $R_2$ , independently from each other, stand for  $C_1$ - $C_{25}$ -alkyl, allyl which can be substituted one to three times with  $C_1$ - $C_3$ alkyl or  $Ar_3$ , or  $-CR_3R_4-(CH_2)_m-Ar_3$ , wherein  $R_3$  and  $R_4$  independently from each other stand for hydrogen or  $C_1$ - $C_4$ alkyl, or phenyl which can be substituted one to three times with  $C_1$ - $C_3$  alkyl,

$Ar_3$  stands for phenyl or 1- or 2-naphthyl which can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, halogen or phenyl, which can be substituted with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy one to three times, and  $m$  stands for 0, 1, 2, 3 or 4,

$Ar_1$  and  $Ar_2$ , independently from each other, stand for



, which can be substituted one to four times with  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ alkoxy, or phenyl



wherein

$R_5$ ,  $R_6$  and  $R_7$ , independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-NR_8R_9$ ,  $-OR_{10}$ ,  $-S(O)_nR_{8'}$ ,  $-Se(O)_nR_{8'}$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy,

wherein  $R_8$  and  $R_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1-C_8$ alkyl,  $C_1-C_8$ alkoxy, or halogen, or  $R_8$  and  $R_9$  stand for  $-C(O)R_{11}$ , wherein  $R_{11}$  can be  $C_1-C_{25}$ -alkyl,  $C_5-C_{12}$ -cycloalkyl,  $R_{10}$ ,  $-OR_{12}$  or  $-NR_{13}R_{14}$ , wherein

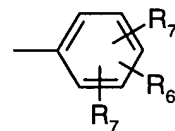
$R_{12}$ ,  $R_{13}$ , and  $R_{14}$  stand for  $C_1-C_{25}$ -alkyl,  $C_5-C_{12}$ -cycloalkyl,  $C_6-C_{24}$ -aryl,

or

$R_5$ ,  $R_6$  and  $R_7$ , independently of one another, stand for a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein the aryl and heterocyclic radical can be substituted one to three times with  $C_1-C_8$ alkyl or  $C_1-C_8$ alkoxy, or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or

$-CH_2-CH_2-NR'_5-CH_2-CH_2-$ , and  $n$  stands for 0, 1, 2 or 3, wherein  $R'_5$  independently from each other, stand for hydrogen, cyano, halogen,  $C_1-C_6$ alkyl,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1-C_8$ alkyl or  $C_1-C_8$ alkoxy,

and wherein Z stands for a diradical selected from the group consisting of a single bond,  $C_2-C_6$ alkylene, which can be substituted one to three times with  $C_1-C_4$ alkyl,  $C_1-C_4$ alkoxy, or phenyl, phenylene or naphthylene, with the proviso that  $R_6$  and  $R_7$  do not stand simultaneously for hydrogen,

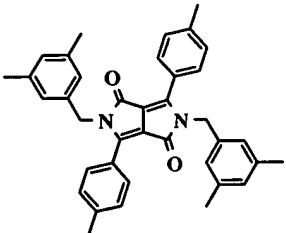
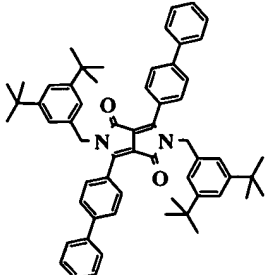
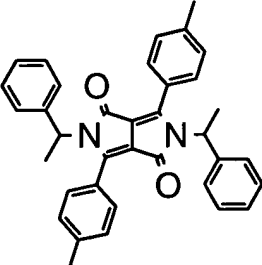
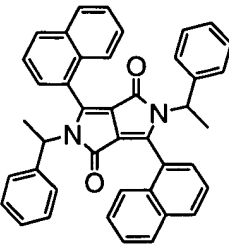
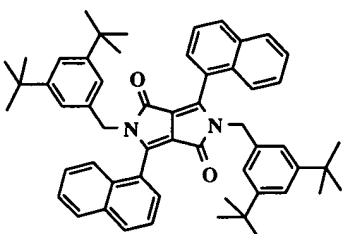
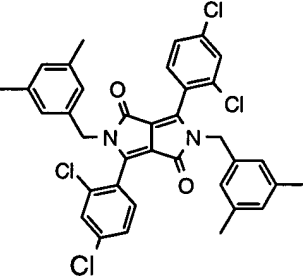
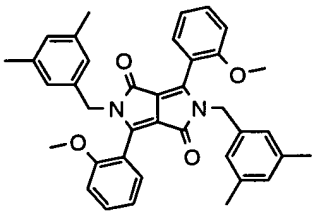
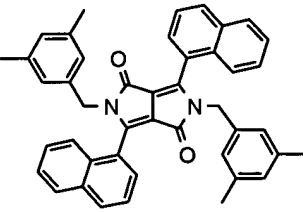
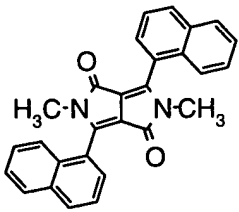
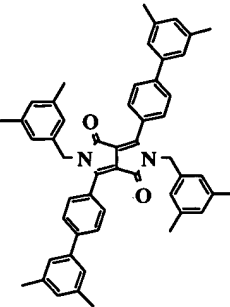


wherein in case of the DPP represented by formula III  $Ar_1$  and  $Ar_2$  can also stand for

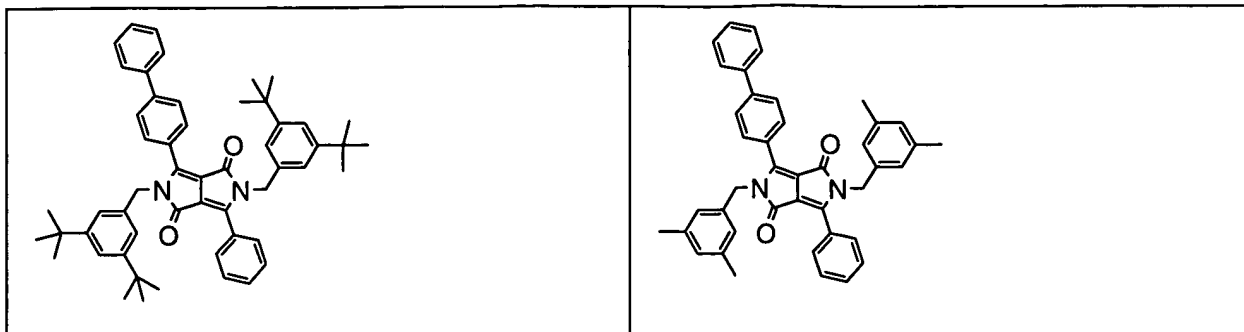
wherein  $R_5$ ,  $R_6$  and  $R_7$ , independently from each other, stand for hydrogen, cyano, halogen,  $C_1-C_6$ alkyl,  $-NR_8R_9$ ,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1-C_8$ alkyl or  $C_1-C_8$ alkoxy.

12. (amended) An electroluminescent device according to claim 1 wherein  $R_8$  and  $R_9$  together stand for  $-CH_2-CH_2-O-CH_2-CH_2-$ .

13. A compound according to the formulae

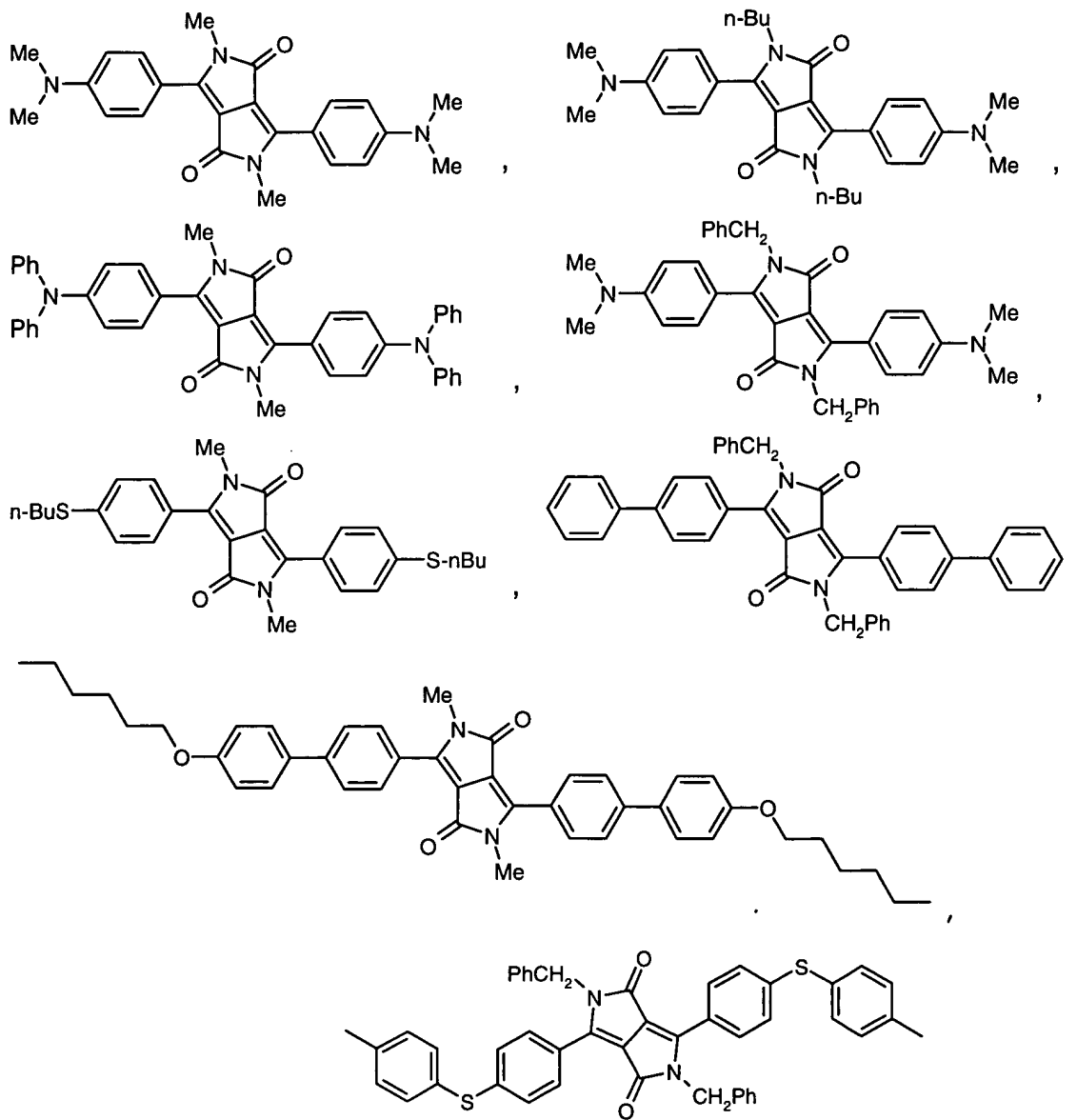
	
	
	
	
	

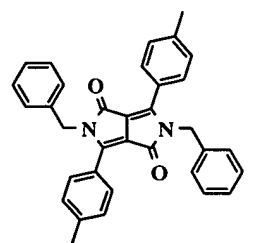
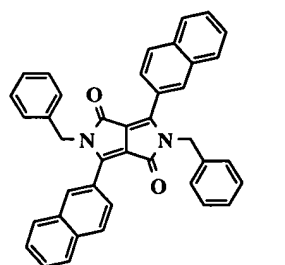
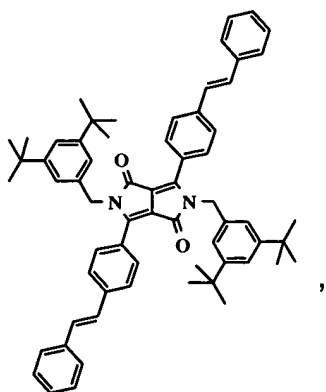
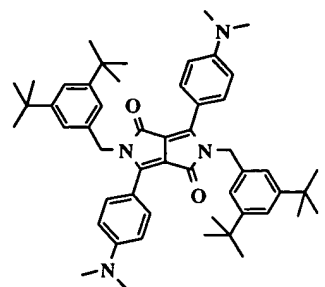
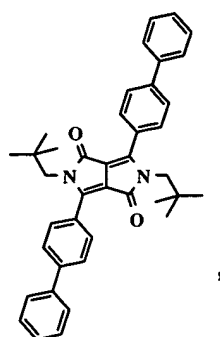
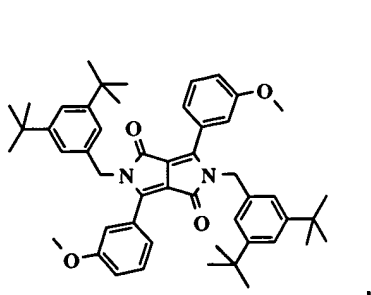
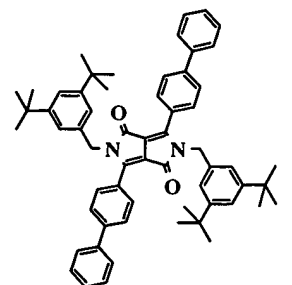
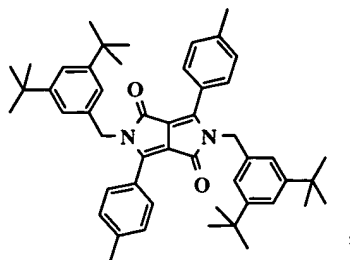
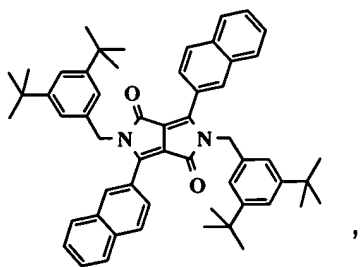
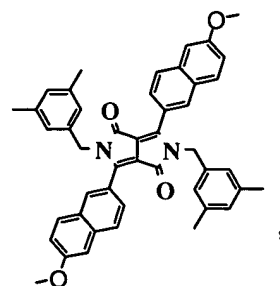
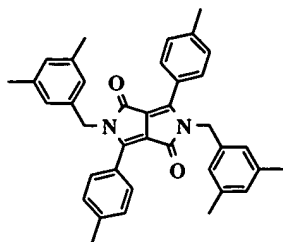
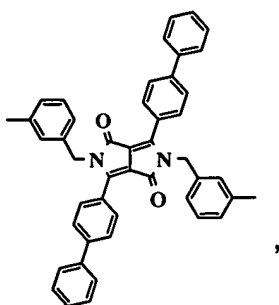
C3  
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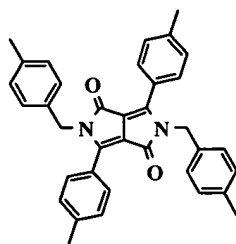
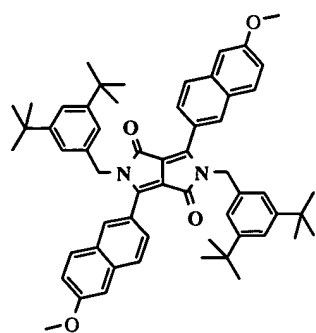
14. (new) A compound according to the formulae

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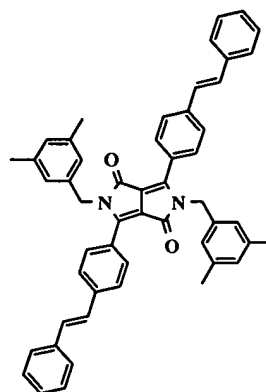




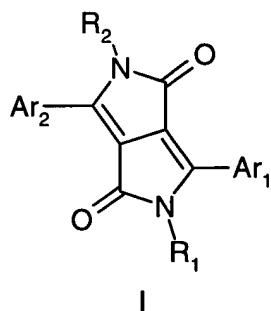
CP  
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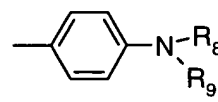
and



15. (new) A compound of formula I

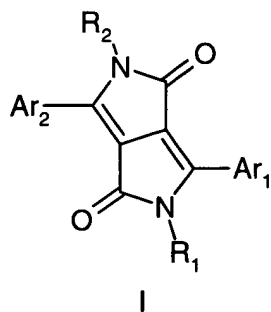


wherein  $R_1$  and  $R_2$  are  $C_1$ - $C_8$ alkyl,  $Ar_1$  and  $Ar_2$  are a group of formula



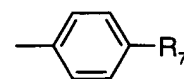
, wherein  $R_8$  and  $R_9$  are  $C_1$ - $C_8$ alkyl or phenyl.

16. (new) A compound of formula I



, wherein

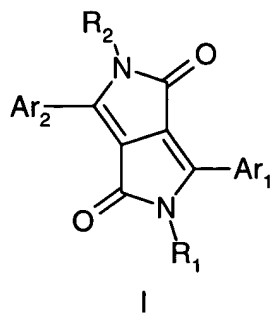
$R_1$  and  $R_2$  are  $C_1$ - $C_8$ alkyl, or  $-(CH_2)_m$ -Ph,  $Ar_1$  and  $Ar_2$  are a group of formula



, wherein  $R_7$  is  $-OR_{10}$ ,  $-N(R_8)_2$  or unsubstituted or substituted phenyl, wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated

or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen and  $R_8$  is  $C_1$ - $C_8$ alkyl, phenyl or a heterocyclic radical, both unsubstituted or substituted, or  $C_5$ - $C_{12}$ -cycloalkyl.

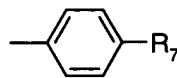
17. (new) A compound of formula I



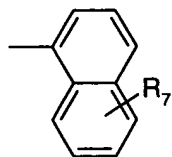
, wherein

$R_1$  and  $R_2$  are  $-CH_2$ -Ph, wherein phenyl can be substituted with phenyl, naphthyl or  $C_1$ - $C_4$ alkyl up to

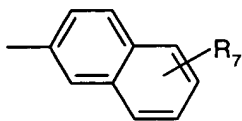
two times,  $Ar_1$  and  $Ar_2$  are a group of formula



, wherein  $R_7$  is  $C_1$ - $C_8$ alkyl or phenyl, or a

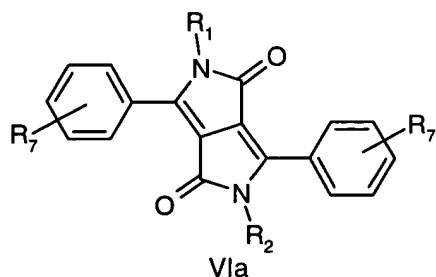


, or



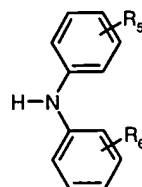
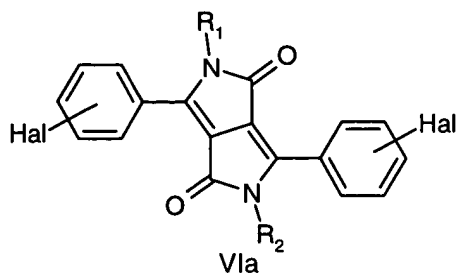
, wherein  $R_7$  is hydrogen or OMe.

18. (new) Process for the preparation of compounds represented by formula Ia



comprising (a) treating in a first step the DPP derivative of formula VIa or formula VIb





wherein  $R_7$  stand for  $-NR_8R_9$ ,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$  or

, wherein  $R_5$  and  $R_6$ ,

independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-NR'_8R'_9$ ,  $-OR_{10}$ ,  $-S(O)_nR'_8$ ,  $-Se(O)_nR'_8$ , wherein

$R_8$  and  $R_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen, or

$R_8$  and  $R_9$  stand for  $-C(O)R_{11}$ , wherein  $R_{11}$  can be  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $R_{10}$ ,  $-OR_{12}$  or  $-NR_{13}R_{14}$ , wherein  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  stand for  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $C_6$ - $C_{24}$ -aryl,

$R'_8$  and  $R'_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein Ph, the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen, or

or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or

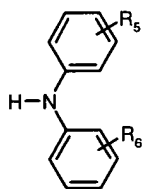
$-CH_2-CH_2-NR'_5-CH_2-CH_2-$ , wherein  $R'_5$  independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy, and  $n$  stands for 0, 1, 2 or 3,

$R'_8$  and  $R'_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  is as defined above, or

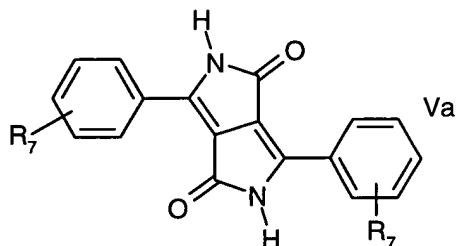
$R'_8$  and  $R'_9$  stand for  $-C(O)R_{11}$ , wherein  $R_{11}$  is as defined above,

or  $-NR'_8R'_9$  stands for a five- or six-membered heterocyclic radical in which  $R'_8$  and  $R'_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or  $-CH_2-CH_2-NR'_5-CH_2-CH_2-$ , wherein  $R'_5$  stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy, and  $n$  is as defined above,

$R_1$  and  $R_2$  are independently from each other, hydrogen,  $C_1$ - $C_{25}$ -alkyl, allyl which can be substituted one to three times with  $C_1$ - $C_3$ alkyl or  $Ar_3$ , or  $-CR_3R_4-(CH_2)_m-Ar_3$ , wherein  $R_3$  and  $R_4$  independently from each other stand for hydrogen,  $C_1$ - $C_4$ alkyl, or phenyl which can be substituted one to three times with  $C_1$ - $C_3$ , Hal stands for halogen, with a nucleophilic agent selected from a selected from  $-NR_8R_9$ ,  $-OR_{10}$ , -

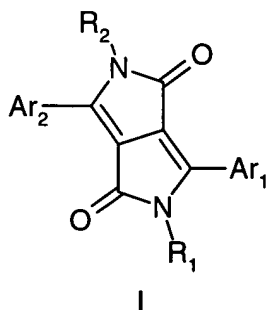


$S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or , in a molar ratio of DPP VIa or VIb:nucleophilic agent in the range of 1.2:1 to 0.8:1, or, if  $R_2$  has the same meaning as  $R_1$  in the range of from 1:2.5 to 1:1, in the presence of an anhydrous dipolar aprotic solvent, and of an anhydrous base in an amount in the range of from 0.1 to 15 moles per mole of the nucleophilic agent, at a temperature in the range of from 100 to 220°C and under a pressure in the range of from 100 to 300 kPa, and optionally isolating the obtained compound



(b) then treating the obtained compound Va, wherein  $R_7$  is as defined above, with a base, thereafter in a second step, treating the reaction mixture obtained in the first step of (b) with an alkylating agent, wherein in the first step of (b) the base is a hydride, an alkali metal alkoxide or a carbonate, and the alkylating agent is a compound of the formula  $(R_1)_{1 \text{ or } 2}X$ , wherein  $X$  stands for  $SO_3^-$ , (p-Me-phenyl)- $SO_3^-$ , (2,4,6-trimethyl-phenyl) $SO_3^-$ ,  $-CO_3^-$ ,  $-SO_4^-$ , or halogen, or a mixture of  $(R_1)_{1 \text{ or } 2}X$  and  $(R_2)_{1 \text{ or } 2}X$ .

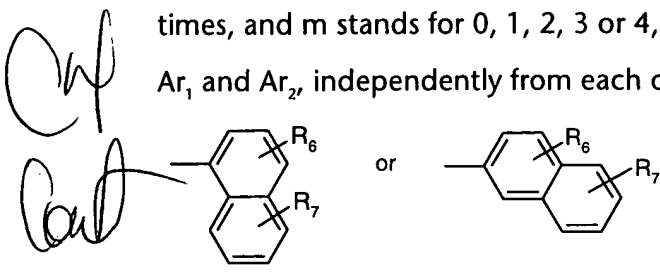
19. (new) Electroluminescent device according to claim 1, wherein, wherein the light-emitting substance is a diketopyrrolopyrrole ("DPP") represented by formula I



wherein  $R_1$  and  $R_2$ , independently from each other, stand for  $C_1$ - $C_{25}$ -alkyl, allyl which can be substituted one to three times with  $C_1$ - $C_3$ alkyl or  $Ar_3$ , or  $-CR_3R_4-(CH_2)_m-Ar_3$ , wherein  $R_3$  and  $R_4$  independently from each other stand for hydrogen,  $C_1$ - $C_4$ alkyl, or phenyl which can be substituted one to three times with  $C_1$ - $C_3$  alkyl,

$Ar_3$  stands for phenyl or 1- or 2-naphthyl which can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, halogen or phenyl, which can be substituted with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy one to three times, and  $m$  stands for 0, 1, 2, 3 or 4,

$Ar_1$  and  $Ar_2$ , independently from each other, stand for



$R_6$  and  $R_7$ , independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-NR_8R_9$ ,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy,

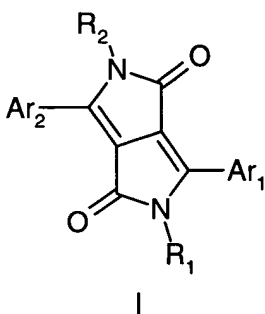
wherein  $R_8$  and  $R_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ ,  $R_{10}$ , wherein  $R_{10}$  stands for  $C_6$ - $C_{24}$ -aryl, or a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms,

wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein  $Ph$ , the aryl and heterocyclic radical can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, or halogen, or

$R_8$  and  $R_9$  stand for  $-C(O)R_{11}$ , wherein  $R_{11}$  can be  $C_1-C_{25}$ -alkyl,  $C_5-C_{12}$ -cycloalkyl,  $R_{10}$ ,  $-OR_{12}$  or  $-NR_{13}R_{14}$ , wherein  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  stand for  $C_1-C_{25}$ -alkyl,  $C_5-C_{12}$ -cycloalkyl,  $C_6-C_{24}$ -aryl, or

$R_8$  and  $R_9$ , independently of one another, stand for a saturated or unsaturated heterocyclic radical comprising five to seven ring atoms, wherein the ring consists of carbon atoms and one to three hetero atoms selected from the group consisting of nitrogen, oxygen and sulfur, wherein the heterocyclic radical can be substituted one to three times with  $C_1-C_8$ alkyl or  $C_1-C_8$ alkoxy, or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or  $-CH_2-CH_2-NR'_5-CH_2-CH_2-$ , wherein  $R'_5$  independently from each other, stand for hydrogen, cyano, halogen,  $C_1-C_6$ alkyl,  $-OR_{10}$ ,  $-S(O)_nR_8$ ,  $-Se(O)_nR_8$ , or phenyl, which can be substituted one to three times with  $C_1-C_8$ alkyl or  $C_1-C_8$ alkoxy, and  $n$  stands for 0, 1, 2 or 3.

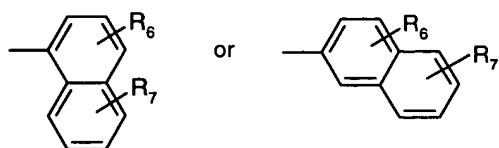
20. (new) Electroluminescent device according to claim 19, wherein the light-emitting substance is a diketopyrrolopyrrole ("DPP") represented by formula I



wherein  $R_1$  and  $R_2$ , independently from each other, stand for  $C_1-C_{25}$ -alkyl, or  $-CR_3R_4-(CH_2)_m-Ar_3$ , wherein  $R_3$  and  $R_4$  independently from each other stand for hydrogen,  $C_1-C_4$ alkyl, or phenyl which can be substituted one to three times with  $C_1-C_3$  alkyl,

$Ar_3$  stands for phenyl which can be substituted one to three times with  $C_1-C_8$ alkyl,  $C_1-C_8$ alkoxy, halogen or phenyl, which can be substituted with  $C_1-C_8$ alkyl or  $C_1-C_8$ alkoxy one to three times, and  $m$  stands for 0, 1, 2, 3 or 4,

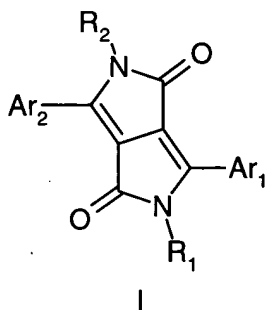
$Ar_1$  and  $Ar_2$ , independently from each other, stand for



, wherein

$R_6$  and  $R_7$ , independently from each other, stand for hydrogen, cyano, halogen,  $C_1$ - $C_6$ alkyl,  $-NR_8R_9$ ,  $-OR_{10}$ , or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy, wherein  $R_8$  and  $R_9$ , independently from each other, stand for hydrogen, phenyl,  $C_1$ - $C_{25}$ -alkyl,  $C_5$ - $C_{12}$ -cycloalkyl,  $-CR_3R_4-(CH_2)_m-Ph$ , or  $-NR_8R_9$  stands for a five- or six-membered heterocyclic radical in which  $R_8$  and  $R_9$  together stand for tetramethylene, pentamethylene,  $-CH_2-CH_2-O-CH_2-CH_2-$ , or  $-CH_2-CH_2-NR'_5-CH_2-CH_2-$ , wherein  $R'_5$  stand for hydrogen,  $C_1$ - $C_6$ alkyl, or phenyl, which can be substituted one to three times with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy.

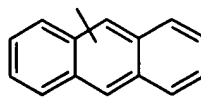
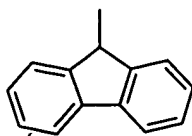
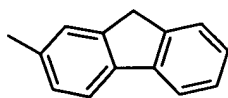
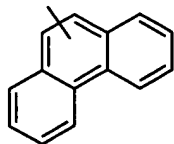
21. (new) Electroluminescent device according to claim 1, wherein the light-emitting substance is a diketopyrrolopyrrole ("DPP") represented by formula I



wherein  $R_1$  and  $R_2$ , independently from each other, stand for  $C_1$ - $C_{25}$ -alkyl, allyl which can be substituted one to three times with  $C_1$ - $C_3$ alkyl or  $Ar_3$ , or  $-CR_3R_4-(CH_2)_m-Ar_3$ , wherein  $R_3$  and  $R_4$  independently from each other stand for hydrogen,  $C_1$ - $C_4$ alkyl, or phenyl which can be substituted one to three times with  $C_1$ - $C_3$  alkyl,

$Ar_3$  stands for phenyl or 1- or 2-naphthyl which can be substituted one to three times with  $C_1$ - $C_8$ alkyl,  $C_1$ - $C_8$ alkoxy, halogen or phenyl, which can be substituted with  $C_1$ - $C_8$ alkyl or  $C_1$ - $C_8$ alkoxy one to three times, and  $m$  stands for 0, 1, 2, 3 or 4,

$Ar_1$  and  $Ar_2$ , independently from each other, stand for



, or

Cancel claims 4, 5, 6, 8-11,